

Claims Amendments

Please amend claims 1-2 and cancel claim 3 as follows:

1. (Currently amended) A linear [[type]]actuator, comprising:
 - a stator unit having coils, obtained by a winding of a magnet wire arranged on a stator yoke, and pole teeth arranged on an inner periphery of the stator unit;
 - a rotor unit rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth, said rotor unit including a field magnet arranged on an outer periphery of a resin portion made of a resin material and conversion means arranged on a portion of an inner periphery of said resin portion~~with a field magnet arranged on an outer periphery thereof, said rotor unit being rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth; and;~~
 - an output shaft having a screw thread on at least a portion of an outer periphery of said output shaft for engaging with said conversion means, said output shaft disposed~~arranged~~ in the central portion of said rotor unit so as to be slidable in an axial direction thereof; [[and]]
 - wherein said conversion means is made of a material having a small friction coefficient and sufficient abrasion resistance, and provided on at least a portion of an inner diametral side of said rotor unit for converting rotary motion of said rotor unit into linear motion of said output shaft;
 - ~~wherein~~ said rotor unit is integrally constituted by insert molding said field magnet and said conversion means.

2. (Previously amended) The linear type actuator as set forth in claim 1, wherein said conversion means is configured with a plurality of straight sides and has corners thereof rounded.

3. (Previously canceled)

4. (New) The linear actuator as set forth in claim 1, wherein magnet stoppers are arranged on both end faces of said field magnet by an insert molding process.

5. (New) The linear actuator as set forth in claim 1, wherein said conversion means comprises a hexagon shaped nut.

6. (New) The linear actuator as set forth in claim 1, wherein said conversion means comprises a square shaped nut.

7. (New) The linear actuator as set forth in claim 1, wherein said conversion means comprises a spline shaped nut.

8. (New) A linear actuator, comprising:
a stator unit having coils, obtained by a winding of a magnet wire arranged on a stator yoke, and pole teeth arranged on an inner periphery of the stator unit;
a rotor unit rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth, said rotor unit including a field magnet arranged on an outer periphery of a resin portion made of a first resin material and conversion means made of a second resin material arranged on at least a portion of an inner periphery of said resin portion, wherein said second resin material is different from said first resin material; and;
an output shaft having a screw thread on at least a portion of an outer periphery of said output shaft for engaging with said conversion means, said output shaft disposed in the central portion of said rotor unit so as to be slidable in an axial direction thereof;
wherein said conversion means is made of a material having a small friction coefficient and sufficient abrasion resistance, said rotor unit is integrally constituted by insert molding said field magnet and said conversion means, and said conversion means is made of a material which is different from the material of said resin portion.

9. (New) The linear actuator as set forth in claim 8, wherein said first resin material comprises polybutylene terephthalate, and said second resin material comprises polyphenylene sulfide.

10. (New) The linear actuator as set forth in claim 8, wherein magnet stoppers are arranged on both end faces of said field magnet by an insert molding process.